LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES

TB Times

Shirley Fannin, M.D.
Director, Disease Control Programs

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Director, Tuberculosis Control Program

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Save the Date

After more than twenty years, Dr. Hanh Lê, Associate Director, Tuberculosis Control, plans to retire. His retirement party will take place July 14, 2000 at Emperor's Pavilion in China Town. Dr. Lê began his career with the County in April 1980 when he joined the Tuberculosis Control Program as Assistant Director. Dr. Lê soon became recognized in Los Angeles for his broad base of knowledge and expertise in the field of tuberculosis, which he has generously shared with physicians and nurses as well as other professionals through consultations and presentations.

Dr. Hanh Lê, has been recognized as a leader within the State of California, serving as President of the California Tuberculosis Controllers Association, and was a recipient of its most prestigious award for outstanding contributions toward the control of tuberculosis in the State of California.

If you would like to make a reservation for the celebration, please contact Karen Cho at (213) 744-6191 or Annie Luong at (213) 744-6232. More detailed information will follow.

UCLA Study on Latent Infection among Skid Row Homeless Population

UCLA School of Nursing Researchers released preliminary study results at the American Thoracic Society's International Conference in Toronto demonstrating high levels of Latent Tuberculosis Infection (LTBI) among the Los Angeles Skid Row homeless population. Their research, funded through the National Institute of Drug Abuse, screened over 640 homeless adults residing in 16 shelters in the Skid Row area to determine rates of LTBI. The study, under principal investigator, Adey Nyamathi, Ph.D., revealed that 25 percent of the study population tested positive for TB. Non-whites exhibited more than double the risk for infection than whites, while rates among homeless men and women were similar.

Conferences

TB Conferences on the first Friday of the month are held in the auditorium (Andrew Norman Hall) of Orthopaedic Hospital located at Adams Blvd. & Flower Street. The Physician Case Presentations on the third Friday of the month are held at the TB Control Program Office, Room 506A. Participants must sign-in to receive applicable continuing education credit. Late arrivals of 15 minutes or more for a one hour program or 30 or more for a two hour program will not receive CME credit.

June 2, 2000
9:00 am - 10:30 am
Orthopaedic Hospital - Andrew Norman Hall
Current Issues in Tuberculosis
"Management of TB in Children"
Robert Allison, M.D.
Clinical Assistant Professor of Pediatrics - USC School of Medicine

June 2, 2000
10:30 am - 12:00 Noon
Orthopaedic Hospital - Crowe Room
Physician Case Presentations
Hanh Quoc Le, M.D.

June 2, 2000
10:30 am - 11:30 am
Orthopaedic Hospital - Andrew Norman Hall
E.R.N. Quarterly Inservice
"Side Effects of The First Line TB Drugs"
Stephen M. Puentes, M.D.

June 13, 2000
8:00 am - 4:30 pm
TB Control Program Headquarters, Room 506A
Nursing Intensive - TB 101

June 16, 2000
9:00 am - 11:30 am
TB Control Program Headquarters, Room 506A
Journal Article Review and Case Presentations
Hanh Quoc Le, M.D.

June 27, 2000
8:00 am - 12:00 Noon
TB Control Program Headquarters
Community Health Worker Half Day Inservice
Robert Miodovski, M.P.H.

Homeless Health Care Los Angeles' TB Risk Mitigation Project Update

Eve Rubell, MPH
Director, Training and Education

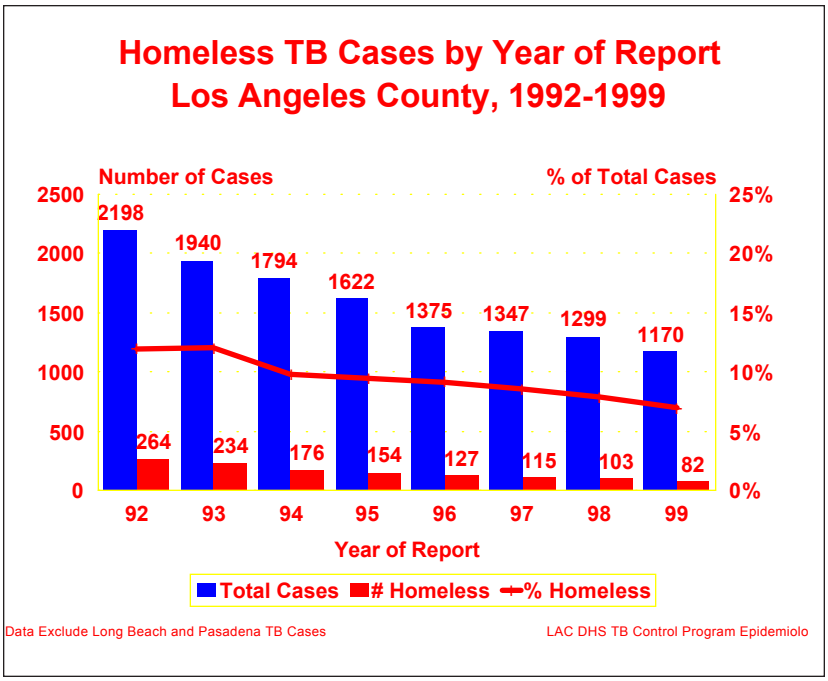
Homeless Health Care Los Angeles

Editor's note: This article provides an update for readers on Homeless Health Care Los Angeles. The project was reviewed in the July 1998 TB Times (Vol. 10, No. 7) .

Homeless Health Care Los Angeles.(HHCLA), a private non-profit agency, conducts a comprehensive TB prevention program for employees who work with homeless persons. Since 1995, the project has been funded through Los Angeles County's DHS Tuberculosis Control Program and HUD's Housing Opportunities for People with AIDS (HOPWA). HHCLA trains approximately 75 to 100 agencies each year.

Need for Staff Training

Many homeless agencies are small, grass roots agencies with few or no resources for staff development and training. Some agencies lack written TB policies and procedures, which jeopardizes the health of staff and clients. Fear and misinformation have led to stigmatizing clients who were perceived as having TB. High staff turnover results in a lack of consistency regarding policies and a need for frequent trainings.



Staff Training

TB trainings are provided on-site in English or Spanish at no cost to the participating agencies. During the two-hour training, particiants are taught how to recognize symptoms of TB and are given health resources to use when referring clients. Transmission, prevention, treatment and the connections between TB, HIV and homelessness are also discussed. A Tuberculosis Prevention Guide for Homeless Service Providers is provided to each agency.

An optional part of the project is a walk-through inspection of the agency to assess the risk of environmental TB transmission. The HHCLA TB health educator, trained by the Curry National TB Center and LA County TB Control, observes bed spacing, ventilation, TB exposure plans, and infection control methods. Based on the inspection, the health educator meets with the agency director and reviews written recommendations to reduce the risk of TB.

Recent Developments

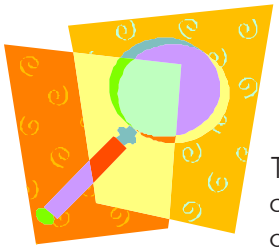
A program evaluation found that after the training, staff knowledge and awareness of TB increased, as did the number of TB risk mitigation activities engaged in by staff.

A number of agencies that have received the training in the past have since implemented written TB policies, including staff and client TB testing. Nevertheless, staff need continual encouragement to follow the policies. We find that more agencies are aware of the problem of TB than in previous years, and a wider range of agencies recognize the need for staff TB education. Several agencies have invited us to return for annual updates and to train new staff and volunteers.

Conclusion

In looking back over the past several years of providing tuberculosis trainings to homeless service providers, I am reminded of Prochaska and DiClement's " stages of change model". Initially, when Homeless Health Care Los Angeles began providing TB education, most providers were not aware of the problem or of the need for change (precontemplation) or they were aware of the problem but were not committed to taking any action (contemplation). Through numerous efforts over the years by the Los Angeles County TB Control Program and others, agencies have moved further along the stages of change. At a minimum, agencies are willing to make small changes (preparation), some agencies commit considerable time and energy (action), and some agencies are in the maintenance stage with a commitment to continued training and prevention activities.

We at Homeless Health Care Los Angeles think that we have helped homeless service providers move along the continuum of change. We are committed to continuing that process toward eliminating tuberculosis among homeless individuals in Los Angeles County.



TB Times Readership Survey Completed

The TB Times editorial staff recently completed its survey to assess reader opinions on the content, format and delivery of the TB Times newsletter. Staff would like to express their appreciation to all of the readers who assisted this process by sending back surveys. The results of the study, summarized below, were quite favorable and let us know that we are on the right track. A few areas indicate that improvement is needed, but that there are no major changes required to meet reader needs and expectations.

We asked readers about distribution frequency and delivery methods. Readers responded that they would like to continue to receive the newsletter on a monthly basis through the mail. A total of 145 surveys were returned out of 1,200 delivered (a 12 % return rate).

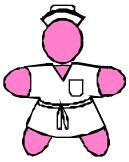
Desired Content

- 53.3% (n=69) would like more scientific content vs. 38.8% who find the level acceptable and 7.8% would prefer less.
- 59.2% (n=77) found the Epi. Data levels acceptable vs. 30% who would like more data.
- 56.6% (n=73) requested more updates on policies & protocols.
- 46.5% (n=60) would like more information on case management compared with 36.4% as sufficient.

Readers reported that they use the newsletter for epidemiological and planning purposes as well as to stay clinically and programmatically informed. A number of readers suggested topics that they would like to see covered in the newsletter. These suggestions ranged from providing greater detail on district and community activities to reporting on HIV, nutrition, treatment therapies, and global TB issues and programs.

The editorial staff will strive to ensure that the TB Times meets on-going reader need and informs the community about emerging tuberculosis issues and program developments. We commit to deliver a useful and high-quality product and will incorporate the constructive suggestions raised through the readership study. Finally, we would like readers to know that their opinions and suggestions will always be welcomed. Please forward any TB Times concerns to Bob Miodovski at 2615 S. Grand Avenue, #507, L.A., CA 90007 or via e-mail at rmiodov@dhs.co.la.ca.us

Nursing Highlights



Contact Investigation What is Enough?

Is identification, screening, counseling and starting INH Prophylaxis enough? How aggressive should we be in pursuing these contacts to complete therapy? What mechanisms can we use to encourage compliance.

In the last 6 weeks there have been three children admitted to hospitals as "TB suspects, rule out meningitis" All three children were identified as high risk household contacts to PTB III with positive sputum smears. All three had symptoms of meningitis and CSF with protein and glucose ratios consistent with meningitis. Two of these children had gastric aspirates positive for MTBC on cultures. The third child had gastric smears with negative cultures pending. Their ages are 2 years., 9 months and 4 months. The source case for the two year old was diagnosed in February 1999 and is the child's grandmother who babysat the child. The child was diagnosed on April 27, 2000. The source case for the 9 month old was diagnosed in January 2000 and is the child's father. The child was diagnosed in March. Finally, the source case for the four month old (the child's father) was diagnosed in March, 2000, with the child being diagnosed during the same month.

This coincidence caused me to wonder if they were they placed on INH? What was done to monitor compliance? If care givers were noncompliant, what was done? What could have been done?

Contact investigation and follow-up outcomes are areas that will be examined. I will be discussing some issues regarding fact finding with the epidemiology unit. I plan to publish this information and my opinion regarding this issue from a nursing perspective.

I would like to invite district public health nurses to share their experiences with difficult contact follow-ups and outcomes. We can learn from your experiences. Hopefully this will be an ongoing process.

- Barbara Lewis, A.P.S.

Guidelines for Treatment of Tuberculosis for Patients with end stage renal failure on hemodialysis

Patients with end-stage renal failure on hemodialysis are at high risk of developing tuberculosis disease. The diagnosis of tuberculosis is difficult and often delayed. The treatment is complicated by changes in drug pharmacokinetics subsequent to renal failure and hemodialysis. The elimination of anti-tuberculosis drugs relies on hepatic metabolism and renal excretion. With hemodialysis, drug clearance depends on many dialysis-related or drug-related factors. Recent improvements with high influx, high flow rates, single pass and the use of polysulfone membranes have made the removal of drugs by dialysis more effective.

The pharmacokinetics of anti-TB drugs in patients on dialysis reported in the scientific literature are difficult to compare because of different methods of dialysis, different analytical methods to measure serum levels, and the small number of patients in each study.

There are almost no data on dosing of anti-TB drugs in patients on chronic ambulatory peritoneal dialysis and in patients with severe renal insufficiency who are not on hemodialysis.

Table 1 (please see page 6) summarizes the pharmacokinetics of anti-TB drugs in normal subjects, and patients with renal disease on hemodialysis.

ISONIAZID (INH)

The primary metabolic route of isoniazid elimination is acetylation by the liver. Renal excretion of INH is 9% to 30% of the ingested dose in rapid and slow acetylators respectively. INH might accumulate in slow acetylator patients with renal insufficiency. Hepatic metabolism apparently plays a major role in clearing INH in patients receiving hemodialysis because hemodialysis clearance results in removal of 73% of INH ingested, but only 9% of ingested INH was found in dialysate (2).

RIFAMPIN (RIF)

Rifampin has a heavy molecular weight and is highly protein-bound. Only 6-15% of RIF ingested is eliminated by the normal kidney (5). RIF is not significantly dialysable. RIF elimination depends mainly on hepatic function.

PYRAZINAMIDE (PZA)

Pyrzinamide is primarily hydrolyzed in the liver. Only 3-4% of PZA is found unchanged in the urine but its metabolites, particularly pyrazinoic acid, are renally removed. PZA and its metabolites are highly dialyzable (2).

ETHAMBUTOL (EMB)

Up to 80% of the absorbed fraction of EMB is excreted by the normal kidney. The half life of EMB is increased in patients with renal disease. EMB hemodialysis clearance is high but dialysate recovery is low (17.%)(2) probably because EMB has a large volume of distribution or adheres to the dialyzer membranes and tubing.

AMINOGLYCOSIDES AND CAPREOMYCIN

Aminoglycosides are generally not metabolized; 80% of the intramuscular dose of amikacin is found unchanged in the urine (5). Amikacin's half life is decreased by hemodialysis. Little informations are available for Streptomycin and Kanamycin. Aminoglycosides and capreomycin, a polypeptide, must be used with extreme precaution when they are really needed.

FLUOROQUINOLONES

Ciprofloxacin, ofloxacin and levofloxacin are excreted by the normal kidney (1,4). Their half life is increased in patients with renal disease. There is no information on the dialysability of levofloxacin but it is likely that it is similar to ofloxacin.

ETHIONAMIDE (ETA)

Ethionamide is metabolized in the liver. Only small amounts of ETA and its metabolites are eliminate by the kidney. Data on the dialyzalibity of ETA are not available. ETA can be used in patients with renal failure at normal daily doses, preferably after dialysis (4).

CYCLOSERINE (CS)

Up to 13-92% of cycloserine is filtered and excreted in urine in patients with normal renal function (4). There are no published data regarding the use of CS in patients with renal failure. It's dialyzability is unknown. Patients on CS should be monitored with drug plasma levels when possible.

AMINOSALICYLATE SODIUM (PAS)

PAS is metabolized by the liver. Up to 80% of PAS is eliminated by the normal kidney, mostly as metabolites. PAS accumulates in renal failure. PAS is highly dialyzable. It is recommended that PAS be used at low dose and after each dialysis (3).

DOSAGE RECOMMENDATIONS

There are few published clinical studies addressing the treatment of tuberculosis in patients on hemodialysis. Most studies are retrospective, the numbers of patients small, and the duration of treatment prolonged. Isoniazid and Rifampin

(cont't page 6)

TABLE 1. Pharmacokinetics of Anti-Tuberculosis Drugs

Drug	MW (daltons)	% renal elimin.	Half-life (hr)[a] Norm/renal disease	$t_{1/2}$ (hr)[b] dialysis	% prot. bound	% dialyzed [c]
Isoniazid(2)	137	9-30	1-11/1-11	varied	10	73 [d] 9% (dialysate) [e]
Rifampin(5)	822	6-15	2-5/5-11	5	57-80	not significant
Pyrazinamide(2) Pyrazinoic acid	123	4-14 30	7-13/13-53 10-18/10-64	2-9 2-3	10-20	15-86 [d] 45% dialysate [e] 18-85 [e]
Ethambutol(2)	227	40-80	3-5/7-15	1-2	20-30	7-17 [d] 1.5% dialysate [e]
PAS(3)	153	80	1/U	U	50-60	80 [d]
Capreomycin(4)	N/A	57	3-4/U	U	N/A	U
Streptomycin(4) Amikacin	782	70-90 90-98	3/100 2-3/30-150	U 4-7	35 4	U 30-70 [d]
Ciprofloxacin Ofloxacin Levofloxacin(1)	366 361 370	40-70 70-90 67-87	3-10/4-12 7-8/11-50 4-8/U	3 8-12 U	20-30 30-35 24-38	20-30 [d] 15-20 [d] U
Ethionamide(4)	N/A	1-5	2-3/U	U	10-30	U
Cycloserine(4)	102	13-92	5-12/U	U	U	U

a. Half-life in patient with normal renal function and/or patient with impaired renal function.
b. Half-life in patient on hemodialysis, the drug was given during hemodialysis or shortly before.
c. Percentage of total dose given cleared by dialysis.
d. Percentage of total dose given cleared from serum.
e. Percentage of total dose given recovered in dialysate
U. Unknown

TABLE 2. Dosage Recommendation for Treatment of Tuberculosis in Adult Patient on Hemodialysis

Drugs [a]	*Dose* [a]	
	Per Kilo	*Daily [b] Maximum*
Isoniazid [c]	*5 mg/kg*	*300 mg*
Rifampin [c]	*10 mg/kg*	*600 mg*
Pyrazinamide	*30 mg/kg*	*1500 mg*
Ethambutol	*15 mg/kg*	*800 mg*
Streptomycin	*15 mg/kg IM*	*750 mg IM*
Levofloxacin	*12 mg/kg*	*750 mg*
Ciprofloxacin	*12 mg/kg*	*750 mg*
Ethionamide	*10 mg/kg*	*750 mg*

a. All drugs should be directly observed (DOT) and given after dialysis on dialysis day.
b. Average for a 60 kg patient post dialysis.
c. INH and RIF should be given daily at least during first 2 months. There is no need to increase dosage for intermittent regimen.

have been used at standard doses of 300mg and 600mg daily without severe adverse effects during renal failure. Other drugs were given after hemodialysis. EMB at a dose of 9mg/kg may not be as effective as 15mg/kg but EMB at the dose of 18-20mg/kg has been associated with optic neuritis in patients with renal failure (1).

Table 2 (please see page 6) summarizes the recommended dosage for treatment of tuberculosis in patients with end stage renal failure on hemodialysis. Isoniazid and Rifampin may be given daily (4). Pyrazinamide, Ethambutol, Streptomycin, Ciprofloxacin, Levofloxacin must be given intermittently 2 or 3 times a week. All drugs must be given under direct observation and immediately after each dialysis.

TREATMENT REGIMENS AND DURATIONS

For initial treatment of tuberculosis patients on dialysis, a four drug regimen with INH + RIF + PZA + EMB is recommended during the first 2 months. INH and RIF are given daily and PZA and EMB are given intermittently 2 or 3 times per week depending on dialysis schedule. All drugs are given immediately after each dialysis. When the organism is known to be susceptible to INH and RIF, EMB may be discontinued.

Pyrazinamide may be discontinued after 2 months if the sputum smear for AFB has converted to negative. INH and RIF are continued at least 6 months after culture conversion. INH and RIF may be given intermittently after each dialysis after 2 months of daily treatment to facilitate direct observation. There is no need to increase INH and RIF dosage for an intermittent regimen. If the organism is resistant to INH the regimen should be continued with RIF + PZA+EMB for the total duration of treatment of six months following culture conversion. Tuberculosis Control must be consulted on all patients with renal failure and all patients with drug resistant tuberculosis.

PATIENT MONITORING

- Sputum for AFB studies must be done monthly.
- Baseline liver function studies should be obtained before treatment is started and repeated monthly.
- Before delivery of each dose of medication a clinical assessment for adverse drug reactions should be done. Drugs should not be given to patients with symptoms until assessed by a physician.

REFERENCES

1. Fish DN, Chow AT, Clinical pharmacokinetics of Levofloxactin, Chin Pharmacokinetic 1997, 32(2):101-19
2. Malone RS, Fish DN, Spiegel DM, Childs JM, Peloquin CA. The effect of hemodialysis on Isniazid, Rifampin, Pyrazinamide and Ethambutol. Am J. Respir Critical Care Med. 1999;159:1580-1584.
3. Ogg CS, Toseland PA, Cameron J.S., Pulmonary tuberculosis in patient on intermittent hemodialysis. Brit Med J 1968;2:283-284.
4. Peloquin CA. Antituberculosis Drugs: Pharma cokinetics in Drug Susceptibility in chemotherapy of mycobacterial infections. Heifets LB editor 1991 CRC Press, Inc., Boca Raton, Florida.
5. Summer KK, Hardin TC. Treatment of tuberculosis in hemodialysis patient. J. Inf. Dis Pharmaco, 1996, 2(2): 37-55

Prepared by Hanh Q. Le, M.D.

F . Y . I .

Several employees recently announced either a transfer or their retirement. We wish them all happiness and success.

Dr. Laila Wassef, chest clinician at Monrovia Health Center retired from County service on March 31, 2000 after 15 years with the Department of Health Services.

Monica Murphy, A.P.S., our Extended Role Nurse and Professional Education Coordinator has joined the L.A. County Foster Care Program as a Public Health Nurse Supervisor in the El Segundo area office. Monica has been with the TB Control Program for six years. We will miss her quick wit and expertise, her warmth and her wonderful sense of humor.

Nancy Montoya, A.P.S., from our Nursing Surveillance Service, has also joined the Foster Care Program as a Public Health Nursing Supervisor and will be working in the San Gabriel Valley region. Although Nancy had been with the TB Control Program for only 1 ½ years, she was a wonderful asset to the program and we will all miss her outgoing and cheerful demeanor.

Angela Salarzar, M.P.H. will be taking a lateral transfer in June to become the new health educator in SPA 4. Angela was formerly employed with the Los Angeles chapter of the American Lung Association before coming to TB Control last year.

Congratulations to Farimah Fiali, Epidemiology Analyst, who gave birth to her first child, an 8 lb. 8 oz. baby boy on May 2, 2000!

Tuberculosis in the Elderly

At the CTCA year 2000 spring conference in San Francisco, Dr. Hanh Lê conducted a special seminar on "Tuberculosis in the Elderly" with approximately 70 individuals in attendance. His presentation is summarized in the following article:

Among all ethnic groups, individuals older than 65 years of age have the highest TB rates (per 100,000) of any age group. Asian Pacific elderly are particularly vulnerable with TB rates in Los Angeles County, California and the US of 185.2, 135 and 129.9/100,000 respectively. (1997 and 1998 data)

The elderly develop tuberculosis disease as a result of reactivation of previous TB infection acquired at a younger age. Some may also have been infected only recently, and progressed to active disease. Others, despite previous TB infection but with only a partial immunity, may have been recently reinfected and proceed to a "newly acquired progressive TB disease."

Some elderly persons are poor medical historians because of an altered mental status. The classic signs and symptoms of tuberculosis, such as cough, night sweats, low grade fever, and weight loss, are sometimes diluted among a myriad of signs and symptoms reflecting other diseases afflicting the elderly person.

The Tuberculin skin test may not be accurate for detecting tuberculosis infection in the elderly. In one report only 20% to 30% of newly admitted residents to nursing homes were TB skin test positive even though the majority had lived during a period of time when the prevalence of TB infection was about 60% to 70%. Possible reasons for this decrease are numerous. Some persons might never have been TB infected. Others may have been too sick to react to the tuberculin. Some might have been infected, but the tuberculin reaction waned with time. A very delayed TB skin test reaction may occur in some leading to a false reading (reading at 48-72 hours showed no reaction but if read after 7 to 10 days the site of PPD injection elicites induration). The booster phenomenon has been used to explain false-negative skin reactions but there is no evidence that individuals who need a booster injection to demonstrate a positive reaction have a higher risk of tuberculosis disease than those who remain negative. However, there is evidence that a person whose second skin test increases at least 12 mm is at higher risk of developing tuberculosis. Eight to twelve percent of them will develop TB disease, 90% during the first year after testing. Therefore, such individuals are similar in risk to other recent skin test converters.

Upper lung infiltrates and cavitation are not seen as frequently on chest x-rays in elderly patients with tuberculosis. Atypical patterns such as mid lung field infiltrates with hilar adenopathy,

pleural effusion, or miliary spread, conditions usually seen in progressive primary tuberculosis, are frequently seen in elderly patients with tuberculosis. Lung cancer, chronic pulmonary infection, bronchiectasis, congestive heart failure with or without pleural effusion, just to name a few, must be differentiated from tuberculosis in the elderly. Dementia may obscure the mental status of an elderly individual with TB meningitis.

Because of these many confusing factors, the diagnosis of tuberculosis in the elderly may be overlooked or delayed. The key is SUSPICION. Despite being a primary tool for the diagnosis of TB infection, the tuberculin skin test, if it is negative, does not rule out TB infection in the elderly. Tuberculosis screening for the elderly, particularly upon admission to health care facilities or skilled nursing facilities, must be done with a combination of a TB skin test and a Chest x-ray. Knowing that tuberculosis can mimic many conditions, it must be suspected on any abnormal chest x-ray in the elderly. Many elderly are unable to produce an appropriate sputum specimen for AFB study, even after an induction procedure. However, bronchial washings or bronchoscopy with biopsy frequently will give the answer.

Without waiting for bacterial confirmation, treatment should be started as soon as tuberculosis is suspected. Too many elderly patients have died before confirmation could be made or before treatment was started! Anti-tuberculosis drugs may interact with other medications that individuals may be taking, and adjustments may be needed. The elderly cannot be relied upon to take medications by themselves. All anti-TB drugs must be given under direct observation.

During 1998, Los Angeles County reported 289 new cases of TB among patients 65 years of age and older. This represents 22% of the 1,299 total cases reported in 1998. Fifty seven (57) were closed to the TB registry due to death, a mortality of about 25% for this cohort. Thirty seven (37) cases were reported from long term care facilities, but 19 of them died during treatment (51%). Many died before or shortly after a TB diagnosis was made. Twenty (20) were Isoniazid-resistant, four (4) were Rifampin-resistant and one (1) had MDR TB.

People 65 years of age or more are at high risk for tuberculosis, particularly Asian Pacific elderly. The elderly represent a large repository of latent tuberculosis in LA County. They are likely to transmit disease to others if TB disease develops. They are also commonly infected with resistant organisms. They have a high mortality.

Note: After the presentation, the attendees collectively recognized that the issue of TB in the elderly is a critical one. A volunteer agreeded to approach the CTCA Executive Committee to suggest that they appoint an ad hoc committee to review this issue.

Tuberculosis Cases by Health District
Los Angeles County, April 2000
(Provisional Data)

Service Area	Service Area Total Year to Date	Health District	April 2000	April 1999	Year to Date 2000	Year to Date 1999
SPA 1	1	**Antelope Valley**	0	0	1	4
SPA 2	37	**East Valley**	3	1	7	11
		West Valley	1	4	14	13
		Glendale	7	1	12	8
		San Fernando	2	1	4	4
SPA 3	34	**El Monte**	1	3	12	14
		Foothill	1	0	4	4
		Alhambra	3	7	13	19
		Pomona	1	3	5	6
SPA 4	41	**Hollywood**	4	13	13	32
		Central	5	17	18	23
		Northeast	3	4	10	17
SPA 5	7	**West**	3	3	7	8
SPA 6	40	**Compton**	4	2	10	10
		South	1	2	7	7
		Southeast	4	1	9	3
		Southwest	2	3	14	14
SPA 7	24	**Bellflower**	0	3	4	10
		San Antonio	6	4	14	16
		Whittier	1	1	4	11
		East Los Angeles	0	2	2	9
SPA 8	26	**Inglewood**	2	5	9	15
		Harbor	2	2	3	4
		Torrance	5	8	14	12
	2	**Unassigned**	1	1	2	1
	212	**TOTAL**	62	91	212	275

COUNTY OF LOS ANGELES-DEPARTMENT OF HEALTH SERVICES
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Friday, June 2, 2000
Current Issues in Tuberculosis
Orthopaedic Hospital - 2400 South Flower St.
Los Angeles, CA 90007

8:30 - 9:00 a.m.	Registration and Sign-In (Andrew Norman Hall)
9:00 - 10:00 a.m.	**"The Management of Tuberculosis in Children"** **Robert Allison, M.D.** **Clinical Assistant Professor of Pediatrics, U.S.C. School of Medicine**
10:00 - 10:15 a.m.	Questions
10:15 - 10:30 a.m.	Break
10:30 - 11:30 a.m.	**TB Case Presentations/Discussions** Hanh Quoc Le, M.D., Associate Medical Director, TB Control

Friday, June 16, 2000
Journal Article Review and Case Presentations
Tuberculosis Control Program
2615 South Grand Avenue, Room 506A

8:30 - 9:00 a.m.	Registration and Sign-In
9:00 - 10:00 a.m.	Journal Article Review Hanh Quoc Le, M.D.
10:00 - 10:15 a.m.	Break
10:15 - 11:30 a.m.	TB Case Presentations/Discussions (continued)

Course Description: The June 2nd program will provide participants with an overview of Tuberculosis management strategies in the pediatric population. A review of treatment guidelines for Latent TB Infection and active disease will be provided along with a discussion of how patient care can be enhanced through a collaboration between clinicians in the public and private sectors. In part 2, difficult or complex cases will be presented for audience review and discussion.

Target Audience:
June 2: Physicians, Nurses, Radiologic Technologists, Health Educators, CWs, and PHIs
June 16: Physicians, Nurses, Radiologic Technologists

Credit: Participants arriving more than 15 minutes late for a one hour program or 30 minutes or more for a 2 hour program will not be granted a CME certificate.

Physicians: This is an activity offered by the L.A. County Department of Health Services, Public Health, a CMA-accredited provider. Physicians attending this course may report up to two hours of Category 1 credit toward the California Medical Association's Certificate in Continuing Medical Education and the American Medical Association's Physician Recognition Award.

Nurses: CME credits are applicable toward license renewal for registered nurses by the Board of Registered Nursing as category one CME credits. (There is no CME provider number.)

Radiologic Technicians: Participants attending this program may report up to two hours of Category A continuing education credit to the American Society of Radiologic Technologists.

Educational Methods: Educational methods will include lecture, group discussions, case presentations, x-ray review, and question and answer sessions.

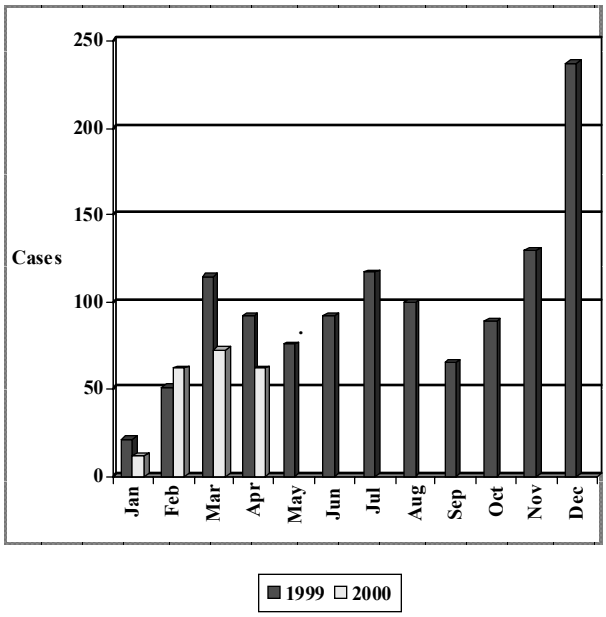
Educational Objectives: At the conclusion of this program, participants will be able to . . . . .

1. Describe the diagnostic work-up for Tuberculosis in children.
2. Review current therapeutic guidelines for treatment of latent TB infection and TB disease.
3. Suggest strategies for improving collaboration between clinicians in the public and private sectors.
4. Review chest x-ray changes in tuberculosis.
5. Apply the latest ATS/CDC recommendations regarding treatment.

THIS PROGRAM IS OFFERED BY AN ACCREDITED CMA-CME PROVIDER AND IS NOT COMMERCIALLY SUPPORTED

Los Angeles County Tuberculosis Incidence

By Month of Report, 1999-2000



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TB Times is a monthly publication providing information to those interested in TB surveillance and TB Control Program activities. Please forward your articles, comments, suggestions or address corrections to:

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May Topics of Interest...